

**MULTI-PHOTON ENDOSCOPIC IMAGING SYSTEM****ABSTRACT OF THE DISCLOSURE**

An imaging system includes a pulsed laser, a pre-compensator for chromatic dispersion, a transmission optical fiber, and a GRIN lens. The pre-compensator  
5 chirps optical pulses received from the laser. The transmission optical fiber transports the chirped optical pulses from the pre-compensator. The GRIN lens receives the transported optical pulses from the transmission optical fiber. The GRIN lens has a wider optical core than the transmission optical fiber and substantially narrows the transported optical pulses received from the transmission optical fiber.